

LONG ISLAND SOUND STUDY
EPA ASSISTANCE AWARD
SEMI-ANNUAL PROGRESS REPORT

Semi-annual progress reports are due to the EPA Project Officer within 30 days of the end of each six month reporting period. Progress reports should be submitted in electronic format via email using commonly available word processing software (e.g., WordPerfect® or Microsoft Word®) or in PDF format. Progress reports must be submitted to the EPA Project Officer (specified on your grant agreement). EPA may post progress reports on the internet. Progress reports should generally not exceed five 8.5" X 11" pages using the below format and these reports shall provide the following information:

EPA Grant Number: LI96161101

- 1. Project Title:** Water quality monitoring enhancements to support the hypoxia management in Long Island Sound.
- 2. Grantee Organization:** University of Connecticut
- 3. Contact Name:** James O'Donnell
- 4. Grant Project/Budget Period:** LI96161101
- 5. Reporting Period:** October 1, 2013 to March 31, 2014.
- 6. Project Description:** *Provide a brief overview of the project, including a reiteration of the goals and objectives of your project and the management implications of your work.*

Goals and Objectives

- i. to develop an interface to the LISICOS ship survey data portal (http://lisicos.uconn.edu/dep_portal.php) that will allow UConn and CT DEEP staff to upload ship survey data and produce hypoxic area and volume estimates together with uncertainties;
- ii. to report the trends over the data record using both the old and new algorithms and the 3.0 and 4.8 mg/l thresholds; and
- iii. to recommend improved sampling strategies to more accurately define the impacted area.
- vi. We propose to construct and deploy from April to October a buoy like those at WLIS and EXRK in the vicinity of stations 13 and 14, and area that is hypoxic in 70-80% of years.

Management Implications

The intended outcome is an improved observation of dissolved oxygen trends and dissemination of observations supported by the EPA LIS program

7. Project Narrative Summary/Accomplishments: Briefly describe accomplishments during the reporting period, including a comparison of actual accomplishments with the outputs and outcomes specified in the work plan. [Add project Program Elements from the work plan in the below chart; add or delete rows as necessary.]

The site (http://lisicos.uconn.edu/dep_portal.php) and programs have been implemented for distribution of data and the database that underlies the system has been extensively revised to improve flexibility of interaction. Software for computing the area and volume of hypoxia has been tested and interaction with the new database is in development.

The new buoy (ARTG, see fig 1) was deployed on May 9th, 2013. It operated throughout the summer and was recovered for maintenance on November, 26th, 2013. Repairs and refurbishment was conducted in preparation for redeployment in May 2014.

A summary of data is shown in Figure 2.

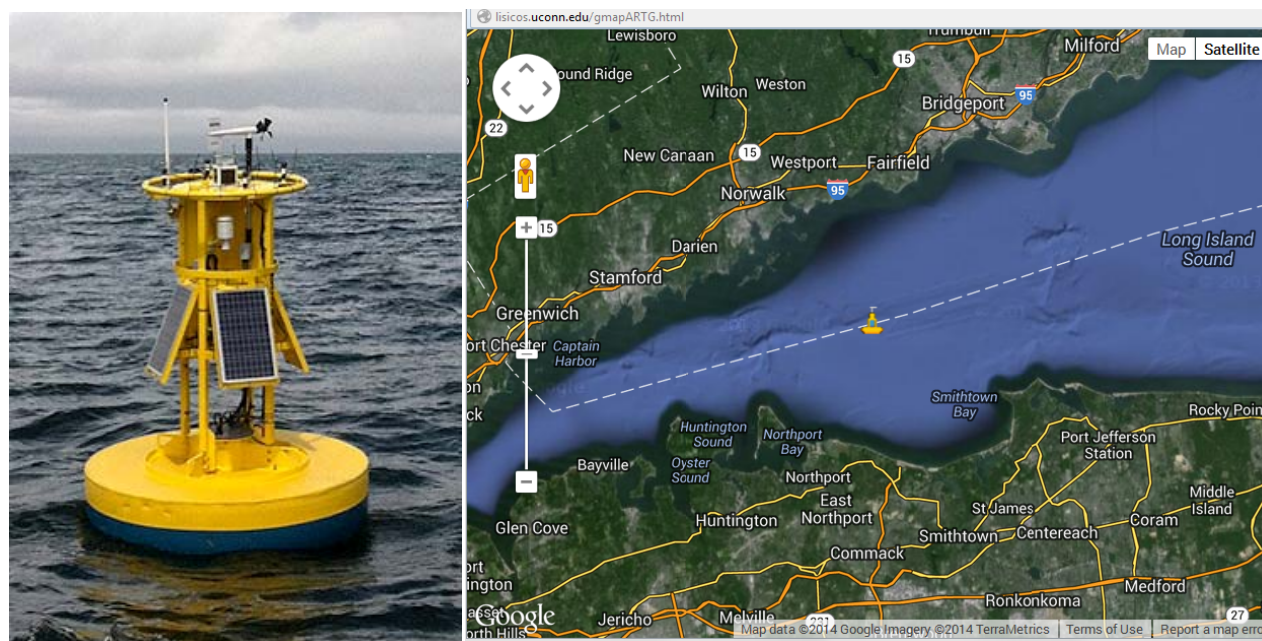


Figure 1. A photograph of the ARTG buoy (41 00.60 N 73 17.29 W) and a map showing the location.

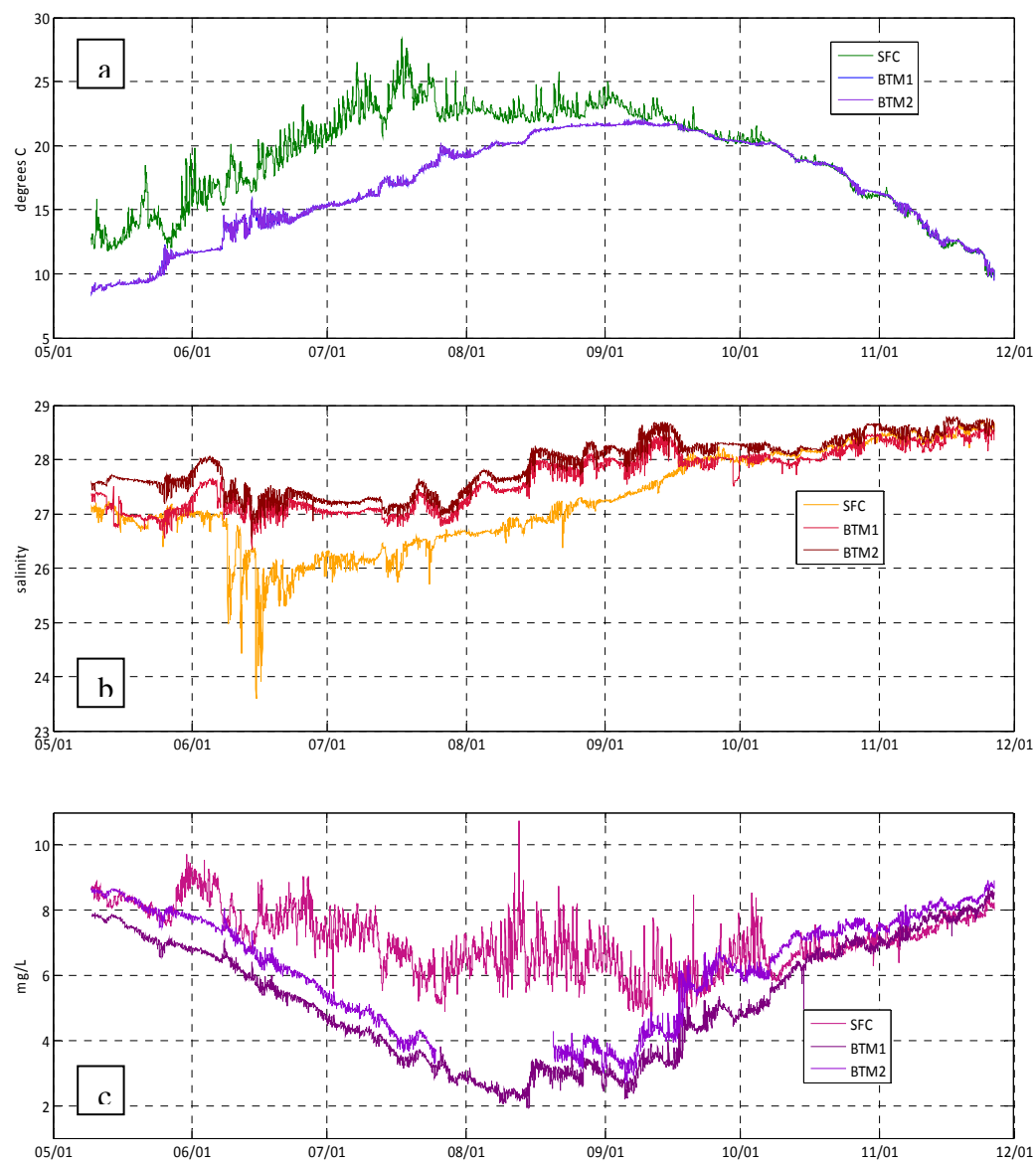


Figure 2. Sea-Bird sensor data from the 2013 deployment period, a) temperature, b) salinity, c) dissolved oxygen concentration.

Work Plan Activity	Deliverable(s)	Timeline or % Time	Expected Output	Actual Output	Expected Outcome	Actual Outcome
<i>Task: Operate data portal for accessing DEEP ship survey data</i>						
	• Build data sys	50	•	•	•	•
	• operate system	50	•	•	•	•
	•		•	•	•	•
<i>Task: Operate buoy</i>						
	• deploy buoy	100	•	•	•	•
	• recover and rehab	100	•	•	•	•
	• share data	100	•	•	•	•
<i>Task:</i>						
	•		•	•	•	•
	•		•	•	•	•
	•		•	•	•	•

- 8. Challenges/Changes:** Address difficulties you have encountered in carrying out this project, any slippages in meeting stated outputs or outcomes, and remedial actions (to be) taken. If the aims of the project have not changed from the original application, state this. If these have been modified, provide the revised aims and discuss the reason for the modification.

The data system development is in progress and requires more interaction with the DEEP staff for testing.

Buoy operations are progressing without difficulty.

- 9. Participants:** Provide basic information about each person who worked on the project – name, role on project, extent of time put in, and what the person has done on the project. Discuss any absence or changes of key personnel involved in the project. Describe the role of any partner organizations (if applicable) that have been involved with the project. Partner organizations may provide financial or in-kind support, supply facilities or equipment, or otherwise contribute.

Kay Howard Strobel and David Cohen have been involved in building the buoy and operating it.

Ben Adams and Todd Fake have worked on the data system.

Grant McCardell has worked on the data analysis.

10. Quality Assurance: *If applicable, address how the requirements of the Quality Assurance Project Plan (if applicable) are being met.*

QAPP plans have been flowed

11. Funding Status: *Describe any funding issues that have affected your progress toward stated goals and provide information on changes that need to be made or have been made to the budget. Pay particular attention to percent of fund remaining against percent of project period remaining.*

No changes

12. Future Activities/Events: *Describe any significant planned activities or events for the next reporting period that may be of general or public interest, e.g., press events, workshops, conferences, training sessions, webinars etc.*

The buoy is ready for redeployment and the data system is in progress.

13. Presentations/Publications/Outreach: *Describe any major presentations you have made about your project and discuss any outreach efforts related to this project. Provide copies of any publications produced as part of the project or provide links or web addresses. Report any articles or papers resulting from this project appearing in scientific, technical, or professional journals, if applicable. Copies of publications and reprints that have not previously been submitted should be enclosed with the report.*

None

14. Other Information: *Attach any materials that represent or highlight project accomplishments during the reporting period or that support the explanations provided above.*